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LUBRICATING OIL SUPPLY SYSTEM FOR THE CONNECTING ROD BEARINGS OF A CRANKSHAFT OF A MULTI-CYLINDER INTERNAL-COMBUSTION ENGINE

BACKGROUND AND SUMMARY OF THE INVENTION

[0001] This application is a continuation of PCT Application No. PCT/EP02/00604 filed January 23, 2002, which claims priority to German Patent Application No. 101 05 542.0 filed on February 7, 2001.

[0002] The invention relates to a lubricating oil supply system for the connecting rod bearings of a crankshaft of a multi-cylinder internal-combustion engine, in which oil ducts extend from bearing journal to crank pins of the crankshaft, and in which oil supply taking place by way of main bearings of the crankshaft. The oil ducts extend from one main bearing or bearing journal respectively to the crank pins or connecting rod bearings in each case adjoining on both sides.

[0003] German Patent Document DE 696 05 567 T2 illustrates a crankshaft for a 4-cylinder in-line engine in the case of which, by way of the bearing journals or main bearings of the crankshaft, the lubricating oil supply to the crank pins or connecting rod bearings adjoining the main bearing on both sides takes place by way of oil bores made in the crankshaft. The central main bearing can remain free of oil supply bores or oil supply grooves as a result of supplying lubricating oil to two connecting rod bearings respectively by way of a crankshaft main bearing.

[0004] It is also known (see, for example, French Patent Document FR-PS 979 586) to provide partial oil supply grooves in the main bearing shells of the crankshaft. The partial oil supply grooves are arranged in a deviated manner with respect to the gas force plane. By way of two oil bores provided in the bearing journal of the crankshaft, a permanent lubricating oil supply to the connecting rod bearing can be ensured by way of the partial oil supply grooves.